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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,618	08/17/2007	Bud Mishra	036017/US/2-475396-00153	6067

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DORSEY & WHITNEY LLP - NEW YORK  
ATTENTION: INTELLECTUAL PROPERTY - PATENT DOCKET  
51 WEST 52ND STREET  
NEW YORK, NY 10019-6119

EXAMINER
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WHALEY, PABLO S

ART UNIT	PAPER NUMBER
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1631

NOTIFICATION DATE	DELIVERY MODE
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07/12/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ny.patent.docketing@dorsey.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/553,618	<b>Applicant(s)</b> MISHRA ET AL.
	<b>Examiner</b> PABLO WHALEY	<b>Art Unit</b> 1631

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 April 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 41-55, 83 and 123-138 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1, 41-55, 83, and 123-138 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br/>Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
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### **DETAILED ACTION**

This following supplemental restriction requirement is required in view of applicant's amendment filed 04/29/2011, which newly adds claims 123-138 and states for the record that these claims are believed by applicant to be separately patentable (see Remarks, page 41).

Applicant is notified that 37 CFR 1.142(a) provides that restriction is proper at any stage of prosecution up to final action, therefore a second requirement may be made when it becomes proper, even though there was a prior requirement with which applicant complied. Ex parte Benke, 1904 C.D. 63, 108 O.G. 1588 (Comm'r Pat. 1904).

#### ***Restriction/Election Requirement***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1, 41-54, 83, and 123-130 drawn to a process, computer-accessible medium, and system for producing one or more portions of a haplotyped or a genotyped genome wide based on single DNA molecule maps, classified in class 702, subclass 19.
- II. Claims 55 and 131-138 drawn to a process, computer-accessible medium, and system for generating a haplotyped genome wide map for each individual patient, and performing a disease gene association based on the generated haplotyped genome wide map of each individual patient, classified in class 702, subclass 19.

The inventions are distinct and divergent, each from the other because of the following reasons:

Inventions I and II are directed to related processes. The related inventions are distinct if: (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the invention of group I results in the function of making a one or more portions of a haplotyped or genotyped genome wide based on single DNA molecule maps. The invention of group II results in the function of performing a disease gene association based on a generated haplotyped genome wide map of each individual patient. The invention of group I embodies both haplotyped and genotyped genome wide maps, and therefore is not limited to a haplotyped genome wide map as required by the invention of group II. The invention of group I also does not require performing a disease gene association in patients using a haplotyped genome wide map. Therefore, the inventions have different functions that require using a different search queries.

Additionally, the inventions of group I and II both recite process, computer-accessible medium, and system claims for performing the above processes. For example, the inventions of group I (in newly added claims 124, 126, and 129) recite new functional limitations of the claimed hardware processor. On the other hand, the invention of group II (in newly added claim 133) recites a method that is not tied to a

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machine (either expressed or inherent) and do not require a physical transformation (either expressed or inherent). Therefore the inventions raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and/or examination burden if restriction were not required because at least the following reason(s) apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election

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shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

/Pablo S. Whaley/

Examiner, Art Unit 1631